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Appl. No. 10/748,765
Amdt. dated December 6, 2006
Reply to Office Action of July 6, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method for preventing or treating ~~an autoimmune disease~~ multiple sclerosis in a subject, the method comprising the step of administering to the subject a therapeutically effective amount of a pharmaceutical composition comprising ~~an Activity Dependent Neurotrophic Factor (ADNF) polypeptide, wherein the ADNF polypeptide is a member selected from the group consisting of:~~

~~(a) an ADNF I polypeptide comprising an active core site having the following amino acid sequence:~~

~~Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:1);~~

~~(b)~~ an ADNF III polypeptide comprising an active core site having the following amino acid sequence:

Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln (SEQ ID NO:2); ~~and~~

~~(c) a mixture of the ADNF I polypeptide of part (a) and the ADNF III polypeptide of part (b)~~ thereby treating or preventing multiple sclerosis in the subject.

2. (Withdrawn) The method of claim 1, wherein the ADNF polypeptide is a member selected from the group consisting of a full length ADNF I polypeptide, a full length ADNF III polypeptide, and a mixture of a full length ADNF I polypeptide and a full length ADNF III polypeptide.

3. (Withdrawn) The method of claim 1, wherein the ADNF polypeptide is an ADNF I polypeptide.

4. (Withdrawn) The method of claim 3, wherein the active core site of the ADNF I polypeptide comprises at least one D-amino acid.

5. (Withdrawn) The method of claim 3, wherein the active core site of the ADNF I polypeptide comprises all D-amino acids.

6. (Withdrawn) The method of claim 3, wherein the ADNF I polypeptide is Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:1).

7. (Withdrawn) The method of claim 3, wherein the ADNF I polypeptide is selected from the group consisting of:

Val-Leu-Gly-Gly-Gly-Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:3);

Val-Glu-Glu-Gly-Ile-Val-Leu-Gly-Gly-Gly-Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:4);

Leu-Gly-Gly-Gly-Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:5);

Gly-Gly-Gly-Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:6);

Gly-Gly-Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:7);

Gly- Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:8); and

Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:1).

8. (Withdrawn) The method of claim 3, wherein the ADNF I polypeptide comprises up to about 20 amino acids at at least one of the N-terminus and the C-terminus of the active core site.

9. (Cancelled)

10. (Original) The method of claim 9, wherein the ADNF polypeptide is a full length ADNF III polypeptide.

11. (Currently amended) The method of ~~claim 9~~ claim 1, wherein the ADNF III polypeptide is Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln (SEQ ID NO:2).

12. (Currently amended) The method of ~~claim 9~~ claim 1, wherein the active core site of the ADNF III polypeptide comprises at least one D-amino acid.

13. (Currently amended) The method of ~~claim 9~~ claim 1, wherein the active core site of the ADNF III polypeptide comprises all D-amino acids.

14. (Currently amended) The method of ~~claim 9~~ claim 1, wherein the ADNF III polypeptide is a member selected from the group consisting of:

Gly-Gly-Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln (SEQ ID NO:9);

Leu-Gly-Gly-Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln-Gln-Ser (SEQ ID NO:10);

Leu-Gly-Leu-Gly-Gly-Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln-Gln-Ser (SEQ ID NO:11);

Ser-Val-Arg-Leu-Gly-Leu-Gly-Gly-Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln-Gln-Ser (SEQ ID NO:12); and

Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln (SEQ ID NO:2).

15. (Currently amended) The method of ~~claim 9~~ claim 1, wherein the ADNF III polypeptide comprises up to about 20 amino acids at ~~least~~ one or both of the N-terminus and the C-terminus of the active core site.

16. (Currently amended) The method of claim 1, wherein ~~at least one of~~ the ~~ADNF polypeptides~~ ADNF III polypeptide is encoded by a nucleic acid that is administered to the subject.

17. (Currently amended) The method of claim 1, wherein the pharmaceutical composition further comprises an ADNF I polypeptide ~~of part (a) and an ADNF III polypeptide of part (b) are administered to the subject~~ comprising an active core site having the following amino acid sequence: Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:1).

18. (Original) The method of claim 17, wherein either or both active core sites of the ADNF I polypeptide and the ADNF III polypeptide comprise at least one D-amino acid.

19. (Original) The method of claim 17, wherein either or both active core sites of the ADNF I polypeptide and the ADNF III polypeptide comprise all D-amino acids.

20. (Original) The method of claim 17, wherein the ADNF I polypeptide is Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:1), and wherein the ADNF III polypeptide is Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln (SEQ ID NO:2).

21. (Previously presented) The method of claim 17, wherein the ADNF I polypeptide is a member selected from the group consisting of:

Val-Leu-Gly-Gly-Gly-Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:3);

Val-Glu-Glu-Gly-Ile-Val-Leu-Gly-Gly-Gly-Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:4);

Leu-Gly-Gly-Gly-Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:5);

Gly-Gly-Gly-Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:6);

Gly-Gly-Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:7);

Gly- Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:8); and

Ser-Ala-Leu-Leu-Arg-Ser-Ile-Pro-Ala (SEQ ID NO:1); and

wherein the ADNF III polypeptide is selected from the group consisting of:

Gly-Gly-Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln (SEQ ID NO:9);

Leu-Gly-Gly-Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln-Gln-Ser (SEQ ID NO:10);

Leu-Gly-Leu-Gly-Gly-Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln-Gln-Ser (SEQ ID NO:11);

Ser-Val-Arg-Leu-Gly-Leu-Gly-Gly-Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln-Gln-Ser (SEQ ID NO:12); and

Asn-Ala-Pro-Val-Ser-Ile-Pro-Gln (SEQ ID NO:2).

22. (Currently amended) The method of claim 17, wherein the ADNF I polypeptide comprises up to about 20 amino acids at ~~least~~ one or both of the N-terminus and the C-terminus of the active core site of the ADNF I polypeptide, and wherein the ADNF III polypeptide comprises up to about 20 amino acids at ~~least~~ one or both of the N-terminus and the C-terminus of the active core site of the ADNF III polypeptide.

23. (Currently amended) The method of claim 1, wherein the subject has ~~an autoimmune disease~~ multiple sclerosis.

24. (Currently amended) The method of claim 1, wherein the ADNF polypeptide is administered to prevent ~~an autoimmune disease~~ multiple sclerosis.

25. (Cancelled)

26. (Currently amended) The method of claim 1, wherein the ~~ADNF polypeptide~~ pharmaceutical composition is administered intranasally.

27. (Currently amended) The method of claim 1, wherein the ~~ADNF polypeptide~~ pharmaceutical composition is administered orally.

28. (Currently amended) The method of claim 1, wherein the ~~ADNF polypeptide~~ pharmaceutical composition is injected.

29. (New) The method of claim 1, wherein proliferation of an immune cell in the subject is inhibited.